



State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation

CN 028
Trenton, NJ 08625-0028
Tel. # 609-633-1408
Fax. # 609-633-1454

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
NO. P 713 693 353

NOV - 8 1991

Cris Anderson, Manager
Environmental Affairs
L.E. Carpenter Co.
1301 E. Ninth Street, Suite 3600
Cleveland, OH 44114

Dear Mr. Anderson:

Re: L.E. Carpenter ACO, dated September 26, 1986
Baseline Risk Assessment, Final Draft, dated September 1991

The New Jersey Department of Environmental Protection and Energy (Department) and the United States Environmental Protection Agency (USEPA) have reviewed the risk assessment document cited above and find revisions are necessary. The following comments concern mainly the handling of the inorganic compounds in soils and sediments and must be addressed in the resubmission. Department personnel has conferred with WSI recently but if further clarification are needed do not hesitate to contact me at soon as possible.

Comments

1. Page 2-1 Section 2 Identification of Chemicals of Potential Concern

It is unclear why the inorganic analytes, particularly the metals lead and antimony which are significantly elevated above background concentrations, were dropped as contaminants-of-concern, since the Department previously objected to elimination of several inorganics. Both agencies feel they must be included in the risk assessment. Since there is currently no recognized reference dose (RfD) for lead, it is suggested that the non-carcinogenic risks for lead be discussed qualitatively in the uncertainty section of this document. This approach must be carried through the FS and will assist in developing remediation goals for the contaminated soils. The document must be revised to include evaluation of these metals.

2. Page 5-1, Paragraph 2 Risk Assessment



The Department did not request that separate risk assessments be calculated for the discrete areas and feels this hot spot analysis is redundant and will complicate the FS and should be deleted. The Department requires that the hot spots be identified and dealt with in the FS. The hot spots must be included in the body of the Baseline Risk Assessment not as separate items.

The objective of the Baseline Risk Assessment, as stated in the document, is to evaluate the potential risk to human health and the environment from exposure to site related contamination associated with each media. As such, risks are calculated in order to determine the degree to which contaminants of concern present a potential risk for the site as a whole. If an unacceptable risk is established, the need to implement remedial measures is evaluated in the Feasibility Study. Remediation goals for L.E. Carpenter will be applicable to all areas of the investigation including "Hot Spot" areas within the site. Therefore, the hot spot analysis presented in Appendix D is not appropriate and should be deleted from the document.

3. Possible Non-Site Related Contaminants, Page 5-25

The statement, "There is no history of use of these compounds at L.E. Carpenter." is incorrect and must be deleted. It has been pointed out in previous correspondence that these compounds were found in monitoring wells #2 and #4 during the sampling that resulted in the signing of the original ACO in 1981, (see Draft FS comment letter to L.E. Carpenter dated April 25, 1991).

4. Page 5-25, Paragraph 3

The Risk Assessment states that, "Lead was detected at relatively low levels on the site in both stream sediments from the Rockaway River and groundwater from the deep aquifer. In surface water and soil samples, lead was detected only at levels below background concentrations.". These statements are incorrect and must be reworded to reflect the actual conditions known to exist at the site. Lead has been detected at elevated levels in the stream sediments and site soils. It is the Department's opinion that the remediation goals to be developed as part of the FS, must include appropriate lead cleanup numbers for soils and sediments.

Also, the Risk Assessment report that, "Significant levels of PAHs were detected in stream sediments at locations upgradient from former production areas...The sediment sampling sites in question were considered to be background locations..". The fact that upgradient sediment locations (the reference to background is in question) contain elevated levels of BNs, does not diminish the fact that sediment samples collected directly adjacent to the former production and impoundment areas, (SS-2, SS-3 and SS-2-3) contained BN compounds at significantly higher levels than upgradient locations. The text must be revised and clearly state the actual conditions known to exist in stream sediments, namely that the highest levels of both organic and inorganic contamination in stream sediments were detected directly adjacent to areas of concern at the site.

5. Uncertainties Relating to Soil Background Levels, Page 5-28

The Statement, "EPA (1989c) recommends that 0-2 feet represent surface soils...", is incorrect. EPA is not specific in the designation of surface soil depth in estimating exposures to soils. This reference must be deleted.

6. Sensitivity Analysis, Page 5-37, Paragraph 2

The Risk Assessment discusses the selection process for inorganic chemicals of concern in the soil pathway. The Report states that, "In the main body of the risk assessment, geometric means of soil background concentrations samples were compared with their respective samples means.". This statement is correct for only a few metals which were presented in Table 2-4. Several metals were inappropriately eliminated in the selection process without appropriate justification. The selection process for inorganic chemicals of concern must be revised.

7. Page 5-38, Paragraph 1

The text states that, "Lead cannot be quantitated due to the absence of approved toxicity criteria. It was dealt with qualitatively in Subsection 4.4.". The referenced section of the Report does not include a qualitative assessment of lead and in fact no such discussion is presented in the Risk Assessment.

8. Ecological Assessment
Page 6-3, Selection of Contaminants of Concern

The values for the mean sediment contaminant concentrations (geometric mean) are significantly lower than those values calculated for the average or arithmetic mean. The Risk Assessment states that, "Due to limited sample sizes, only the geometric means for all identified inorganics were compared.". This statement is not an appropriate justification for applying the geometric mean to data comparisons, which clearly biases the data low. Strong justification for utilizing the geometric mean must be provided, otherwise the arithmetic mean of sediment contaminants must be included. Also, the uncertainty section must include a discussion of how the use of the geometric mean will effect the overall presentation and comparison of contaminant levels in sediments and surface water.

9. Page 6-23, 24, Table 6.5

The values for copper and antimony under the heading, "Highest Sediment Concentration (Location)" are incorrect. The correct values for antimony and copper are; 718 ppm and 711 ppm respectively. The Table must be corrected.

Again, should you have any questions, you may contact me at (609) 633-1455.

Sincerely,

A handwritten signature in dark ink, appearing to read "E. G. Kaup", with a long horizontal flourish extending to the right.

Edgar G. Kaup, P.E. Case Manager
Bureau of Federal Case Management

kj

c: G. Blyskun, BGWPA
D. Henderson, WSI
J. Josephs, EPA
J. Prendergast, BEERA